

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. 2003-NE-08-AD; Amendment 39-13271; AD 2003-16-18]**

**RIN 2120-AA64**

### **Airworthiness Directives; Rolls-Royce plc RB211 Trent 800 Series Turbofan Engines**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

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**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) that applies to Rolls-Royce plc (RR) RB211 Trent 875-17, Trent 877-17, Trent 884-17, Trent 892-17, Trent 892B-17, and Trent 895-17 turbofan engines with intermediate pressure (IP) turbine discs, part numbers (P/Ns) FK21117 and FK33083 installed. This AD requires removal from service of these IP turbine discs based on newly established reduced turbine disc life limits. This AD is prompted by reports of two IP turbine blade release incidents as a result of dust caps separating from the blades and subsequent improved modeling analysis. We are issuing this AD to prevent uncontained IP turbine disc failure and damage to the airplane.

**DATES:** This AD becomes effective September 22, 2003.

**ADDRESSES:** You may get the service information identified in this AD from Rolls-Royce plc, P.O. Box 31 Derby, DE24 8BJ, United Kingdom; telephone 011-44-1332-242424; fax 011-44-1332-249936.

You may examine the AD docket at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA. You may examine the service information, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA.

**FOR FURTHER INFORMATION CONTACT:** James Lawrence, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299, telephone (781) 238-7176; fax (781) 238-7199.

**SUPPLEMENTARY INFORMATION:** The FAA proposed to amend 14 CFR part 39 with a proposed airworthiness directive (AD). The proposed AD applies to RR RB211 Trent 875-17, Trent 877-17, Trent 884-17, Trent 892-17, Trent 892B-17, and Trent 895-17 turbofan engines with IP

turbine discs, P/Ns FK21117 and FK33083 installed. We published the proposed AD in the Federal Register on May 7, 2003 (68 FR 24383). That action proposed to require removal from service of these IP turbine discs based on newly established reduced turbine disc life limits. Information on the reduced life limits may be found in Rolls-Royce Mandatory Service Bulletin (MSB) RB.211-72-E058, dated January 14, 2003.

## **Comments**

We provided the public the opportunity to participate in the development of this AD. We have considered the comments received.

### **Request To Include a Reference to RR Service Information**

One commenter requests that a reference to RR MSB RB.211-72-E058, dated January 14, 2003, be included in the final rule. The commenter believes that the reference to the MSB is necessary for traceability to the AD.

The FAA agrees. The MSB reference is included in the Supplementary Information paragraph and in Compliance paragraph (f)(1) of the AD.

### **Request To Withdraw Unnecessary AD**

One commenter states that the new life limits specified in the AD are being included in the Trent 800 Time Limits Manual (Chapter 5); therefore, the AD is unnecessary to mandate the new reduced life limits.

The FAA does not agree. Although the new life limits are being included in the Trent 800 Time Limits Manual, the reduced life limits are not enforceable unless mandated by an AD. Accordingly, the FAA will not change the AD based on this comment.

## **Conclusion**

We have carefully reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We have determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

### **Changes to 14 CFR Part 39—Effect on the AD**

On July 10, 2002, the FAA published a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs the FAA's AD system. That regulation now includes material that relates to altered products, special flight permits, and alternative methods of compliance. The material previously was included in each individual AD. Since the material is included in 14 CFR part 39, we will not include it in future AD actions.

## **Regulatory Findings**

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866;
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES. Include "AD Docket No. 2003-NE-08-AD" in your request.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Safety.

#### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration amends 14 CFR part 39 as follows:

#### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

# AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at "[www.faa.gov](http://www.faa.gov)"*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2003-16-18 Rolls-Royce plc:** Amendment 39-13271. Docket No. 2003-NE-08-AD.

## Effective Date

- (a) This AD becomes effective September 22, 2003.

## Affected ADs

- (b) None.

## Applicability

(c) This AD applies to Rolls-Royce plc (RR) RB211 Trent 875-17, Trent 877-17, Trent 884-17, Trent 892-17, Trent 892B-17, and Trent 895-17 turbofan engines with intermediate pressure (IP) turbine discs part numbers (P/Ns) FK21117 and FK33083 installed. These engines are installed on, but not limited to Boeing 777 airplanes.

## Unsafe Condition

(d) This AD is prompted by reports of two IP turbine blade release incidents as a result of dust caps separating from the blades. Subsequently, the manufacturer applied improved modeling techniques for analysis, which revealed higher than predicted operating temperatures at the IP turbine disc rim and surrounding area due to inflow of annulus exhaust gases. The actions specified in this AD are intended to prevent uncontained IP turbine disc failure and damage to the airplane.

## Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance cycles specified unless the actions have already been done.

(f) To prevent uncontained IP turbine disc failure and damage to the airplane, do the following:

(1) Remove IP turbine disc P/N FK21117 from service at or before accumulating 8,600 cycles-since-new (CSN), and remove IP turbine disc P/N FK33083 from service at or before accumulating 3,000 CSN. Information on the reduced life limits may be found in Rolls-Royce Mandatory Service Bulletin RB.211-72-E058, dated January 14, 2003.

(2) After the effective date of this AD, do not install any IP turbine disc P/N FK21117, that exceeds 8,600 CSN, or any IP turbine disc P/N FK33083, that exceeds 3,000 CSN.

### **Alternative Methods of Compliance**

(g) Alternative methods of compliance must be requested in accordance with 14 CFR part 39.19, and must be approved by the Manager, Engine Certification Office, Engine and Propeller Directorate, FAA.

### **Material Incorporated by Reference**

(h) None.

### **Related Information**

(i) The subject of this AD is addressed in CAA airworthiness directive 002-01-2003, dated January 14, 2003.

Issued in Burlington, Massachusetts, on August 7, 2003.  
Francis A. Favara,  
Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.  
[FR Doc. 03-20831 Filed 8-15-03; 8:45 am]  
BILLING CODE 4910-13-P